

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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In the Matter of)	
)	
Revision of the Commission's Rules to Ensure)	CC Docket No. 94-102
Compatibility with Enhanced 911 Emergency)	DA 00-1091
Calling Systems)	

COMMENTS

BellSouth Corporation ("BellSouth"), on behalf of its Commercial Mobile Radio Service ("CMRS") subsidiaries and affiliates, comments on the Commission's Public Notice dated May 17, 2000, DA 00-1091 ("Public Notice"). As explained more fully below, BellSouth believes that it is premature for the Commission to adopt December 31, 2001, as a deadline for wireless carriers to implement a solution to the current incompatibility of digital wireless handsets and TTY devices. It also believes that there is no need to adopt additional reporting requirements to monitor carrier progress toward this goal.

BellSouth has been and remains firmly committed to finding and implementing a solution(s) to TTY compatibility problems. No customer is currently being denied access to the benefits of wireless and TTY usage. Customers can use analog wireless handsets for their TTY needs. BellSouth, nevertheless, wants to make its digital networks and their enhanced services available to all of its customers.

In pursuit of that goal, BellSouth has actively participated in the TTY Forum and has written to or met with numerous potential vendors, including Audiovox, Ericsson, Interdigital, Lucent, Mitsubishi, Motorola, NEC America, Nokia, Nortel, OKI, Panasonic,

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and Siemens, as part of its efforts to identify a practical solution to this acknowledged problem.¹

BellSouth also has actively participated in the TTY Forum since its inception. Since mid-1999, BellSouth has held meetings with key manufacturers, including Ericsson, Nokia, and Nortel, specifically to discuss TTY compatibility. Since February 1999, BellSouth has included a discussion of TTY compatibility in every meeting that it has held with equipment vendors.

BellSouth also has chaired the TIA 45.3 standards subcommittee where the TTY CDMA standard was balloted and published. The GSM ANSI standard, which is anticipated to be balloted in the September 2000 timeframe, was an outgrowth of BellSouth's efforts as well as those of other service providers and manufacturers.

In addition to these efforts and consistent with the Commission's requirements, BellSouth has developed and implemented improved guidelines for handling TTY customers. BellSouth informs them of the limitations of current services, and BellSouth offers alternatives where it has no offerings, even if this involves referring the TTY customer to competing carriers which offer analog services. BellSouth has distributed bill inserts to its customers providing information about the compatibility issues. It also has included point-of-sale materials in its stores directing customers who are hard of hearing or deaf to use analog service. It also has included TTY-related information on its website.

¹ As recently as December 1997, the Commission found that " it is currently not possible to provide digital wireless services to TTY users." *Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102 and RM-8143, *Memorandum Opinion And Order*, 12 FCC Rcd 22665, 22693, para. 53 (1997) ("E-911 MO&O").

The Commission's goal of resolving the TTY compatibility problem is laudable, and BellSouth takes it seriously and supports it. However, the Wireless Telecommunications Bureau's ("Bureau") proposal to establish December 31, 2001 as the deadline for implementation of a digital wireless TTY solution is--as amply demonstrated by the record in this proceeding--arbitrary, ill- founded, and unnecessary.

Without belaboring the point, the Commission has established several date-specific implementation deadlines in this proceeding despite information from the wireless industry and manufacturers of wireless equipment that real world solutions were not then available or perhaps even practicable. The Commission has had to modify those dates several times and, in the end, has granted indeterminate waivers for carriers to come into compliance with the requirements of Section 20.18(c).²

During this reprieve, the wireless industry and manufacturers heeded the Commission's admonition to give TTY compatibility priority.³ They have worked collaboratively with emergency and relay service providers (911 and TRS) and consumer organizations representing individuals who are deaf or hard of hearing to find a solution(s) to this problem. Indeed, the TTY Forum reported in November, 1999 that "the wireless industry has diligently attempted to resolve the issue of sending 45.5 Baud Baudot tones over digital air interfaces."⁴ This statement is particularly significant because the TTY Forum consists of representatives of four interest groups: the wireless

² E.g., *MO&O* at 22695, para. 59 (suspending enforcement until Oct. 1, 1998); *Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, *Order*, 14 FCC Rcd 694 (1998) ("Nov. 13 Order"); *Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, 14 FCC Rcd 1700 (1998) ("Waiver Order").

³ *MO&O* at 22694-695, para. 58.

⁴ TTY Forum Technical Status Report, Nov. 13, 1999, at 18.

industry, including wireless carriers and handset manufacturers; manufacturers of TTY equipment; emergency and relay service providers; and consumer organizations representing persons who are deaf or hard of hearing.

However, the uncertainties of having manufacturers 1) identify possible implementations, 2) design and test those implementations, 3) provide prototypes for wireless carriers to test in their networks, and 4) then produce those implementations in quantities sufficient to meet the Commission's requirements are notorious and significant. In 1997, the Commission noted that "[b]ased on the progress of the TTY Forum--which included participation by wireless industry groups, equipment manufacturers, and consumer groups representing individuals with hearing and speech disabilities--the November 20, 1997 TTY Consensus Agreement proposes a 15-month extension for TTY compatibility requirements for wireless digital systems...."⁵

Obviously, the parties to the Consensus Agreement underestimated the difficulties of developing and implementing solutions to the TTY problem. Even now, no commercial implementation exists in practical fact. BellSouth understands that Lucent's Time Division Multiple Access ("TMDA") solution has proved extremely challenging to implement.

Moreover, the Bureau should recognize that the carriers cannot implement solutions to the TTY compatibility problem until equipment has been designed, thoroughly tested, and manufactured in sufficient quantities. Placing a hard-and-fast implementation date on the carriers at this time would simply--but improperly--ignore the real world.

⁵ *MO&O* at 22691, para. 52 (footnote omitted).

The Public Notice identifies only two *possible* solutions to the TTY compatibility problem for most digital wireless providers:

- Lucent's proposed CDMA and TDMA TIA-approved solutions; and
- Ericsson's proposed solution for GSM networks like BellSouth DCS's network, which *may* be approved in July 2000 and a standard *may* be adopted *as early as* September 2000.⁶

Indeed, the Public Notice recognizes that Lucent and Bell Atlantic, now Verizon, are only now testing the Lucent CDMA solution. No test of Lucent's TDMA solution has occurred. Moreover, the TTY Forum recognized that: "although the [Lucent] No-Gain approach may be the most reasonable, there may be other solutions sought by vendors/carriers that may be more practical and timely to implement."⁷ In other words, there is still significant work to be done to identify a satisfactory solution to this problem. The Public Notice in this matter is based solely on information from Lucent and Verizon, and tellingly omits discussion of the status of any other manufacturer.

The industry (and the Commission) has yet to determine which solutions are available, how well each of them work, the relative difficulties of implementation or cost, when the solutions may be available in meaningful quantities, which model phones will be able to incorporate the solution, or when the network changes, if any, will be available. It also is not clear how well the units and necessary network changes will work for the CDMA technologies being tested by Verizon. Moreover, Lucent has not indicated when its solutions will be available in sufficient quantities to meet all of the demands of Verizon let alone the demands of carriers other than Verizon. Nor is it clear

⁶ Public Notice at 2.

⁷ TTY Forum Technical Status Report, Nov. 11, 1999, at 19.

that this solution will work for TDMA systems or that Lucent has sufficient capacity to meet all of that demand.

Further, by rushing to a solution when only one manufacturer may be able to supply wireless carriers a solution, the Bureau might be granting Lucent an artificial "leg up" on its competition. This could inhibit other manufacturers from developing competing--and possibly superior--solutions.

Similarly, carriers could be disinclined to pursue other TTY solutions. For example, if BellSouth were forced to meet a December 31, 2001 date and had to work with Lucent to develop, test and implement the TTY solution by that date, BellSouth might be unwilling or unable to split off some of its limited human resources with the requisite experience from its effort with Lucent to pursue other avenues. That would be particularly unfortunate at this time because the Bureau's current effort has generated a broad-based, industry-wide effort to develop multiple, competing implementations. With the goal so close, stifling that effort makes no sense.

As the Bureau reports, Lucent and Verizon project that the solution may be available in the second half of 2001. However, as stated above, it is not certain that the Lucent CDMA solution or any other solution will work on TDMA or GSM systems (or that the Lucent solution can be practically implemented).

In light of the remaining work to be done and in recognition of the diligent efforts the industry and manufacturers have shown over the past several years, BellSouth believes that the Bureau should permit the industry and those groups working with it to continue to pursue these efforts to deliver a practical and timely implementation of the

TTY compatibility solution. The industry does not need the heavy weight of an artificial and likely unachievable deadline to realize this goal.

When the Bureau granted the carriers' waivers in December 1998, it embarked on a partnership with the wireless industry and manufacturers to work this problem out as soon as possible. The industry is about that business and has shown its good faith in this regard. BellSouth recognizes that the process is taking longer than the Commission, or indeed anyone else, would have hoped. But significant progress has been and continues to be made through the very collaborative process that the Bureau nurtured.

Rather than fall back to the failed practice of setting artificial implementation dates, the Bureau should: applaud the work that has been achieved; renew its insistence that the industry give TTY compatibility a high priority; and stay the course it set just over two years ago. Without using artificial deadlines and burdensome reporting requirements, the Bureau has successfully challenged the wireless industry and manufacturers to address this problem.

However, if the Bureau is unwilling to leave implementation completely open ended, BellSouth proposes an alternative to imposing a specific implementation date on all carriers regardless of the technology they use. Rather, BellSouth would propose that the Bureau specify that a carrier would have 12 months to implement a TTY solution as follows:

- Infrastructure manufacturer (*e.g.*, Lucent, Nortel) reports to the TTY Forum that it successfully has completed its interoperability testing with at least 3 other handset manufacturers specific to a particular network technology (*i.e.*, CDMA, TDMA, or GSM);
- The TTY Forum notifies the Bureau that Step 1 above has been completed successfully, specifying the manufacturer(s) and the technology, and the Bureau in turn notifies the industry; and

- Each carrier using that technology would have twelve months from such notification to complete implementation, assuming availability of sufficient supplies of the equipment and the absence of unavoidable delays.

This proposal recognizes that carriers can only implement that which manufacturers can supply. It also does not hold designers and manufacturers to unrealistic and artificial deadlines that they cannot meet. It also allows manufacturers sufficient flexibility to design and test their implementations. Given the reliance TTY customers will place on these solutions, this extra care is warranted. Further, it will allow all involved a better chance to identify any production or distribution problems that may threaten delivery of the solution to the carriers.

Yet, once the handsets and network equipment are available in fact, this proposal will hold carriers accountable for their implementation of a TTY solution. This is appropriate in that it recognizes that once the solution is available to carriers it is solely within their capabilities to implement it.

BellSouth also does not believe that the Bureau need adopt any additional reporting/monitoring requirements. As noted above, since the Bureau granted waivers in December 1998, the industry and manufacturers have been working, in the TTY Forum's words, diligently to find a solution to the TTY problem. Significant strides have been made without the need for reports to monitor the progress.

The technical forums like TIA and the TTY Forum are open to the public. The Bureau has been actively involved in the TTY Forum. Other representatives of the Commission are welcome to attend. Also, consumer organizations representing individuals who are deaf or hard of hearing are working with the industry in the TTY Forum as the Bureau had hoped and could raise any specific problems with a simple

letter to the Chief of the Wireless Bureau. Further, as demonstrated by the November 11, 1999, letter to Mr. Thomas Sugrue, Chief, Wireless Telecommunications Bureau from Ed Hall and Todd Lantor, Co-chairs of the Wireless TTY Forum, the Bureau can obtain timely responses for information concerning the status of progress toward the TTY implementation.

This process has resulted in significant progress. There is no indication that there is a need to impose costly and time consuming reporting requirements on the industry at this time to bring implementation to a conclusion.

CONCLUSION

For the reasons stated above, BellSouth asks the Bureau to defer from adopting a date-specific implementation requirement for completion of the digital TTY implementation. However, if the Bureau does not allow the collaborative process to complete its natural cycle without an artificial deadline, BellSouth asks the Bureau to adopt its proposal to trigger a carrier's implementation obligation from dates that represent the real availability of handsets and network solutions to this problem. Further, BellSouth urges the Bureau to refrain from adopting any monitoring or reporting requirements at this time.

Respectfully submitted

BellSouth Corporation

By: Charles P. Featherstun

James Harralson
David G. Richards
Charles P. Featherstun
1155 Peachtree St., N.E.
Suite 1800
Atlanta, GA 30309
(404) 249-3855

By: David Frolio / CPF

David G. Frolio
1133 21st St., N.W.
Washington, D.C. 20036
(202) 463-4182

Its Attorneys

June 19, 2000

CERTIFICATE OF SERVICE

I do hereby certify that I have this 19th day of June 2000 served the following parties to this action with a copy of the foregoing COMMENTS OF BELLSOUTH CORPORATION by electronic filing, hand delivery or by placing a true and correct copy of the same in the United States Mail, postage prepaid, addressed to the parties listed on the attached service list.


Ann Mittelstead

Service List
CC 00-102
DA 00-1091

Magalie Roman Salas
Office of the Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
TW-A325
Washington, D.C. 20054

International Transcription Service, Inc.
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